

***Consumers Illinois Water Company - Northern Division***

***Candlewick Operation***

***Proposal for***

***Qualifying Infrastructure Plant Surcharge (QIPS) Rider***

**Revised August 10, 2001**

***Consumers Illinois Water Company - Northern Division (CIWC-CW)***  
***Qualifying Infrastructure Plant Surcharge (QIPS) Rider***

**Objective**

This report provides justification for a QIPS Rider, and establishes an annual level of expenditure that best serves the interests of CIWC-CW and its customers. The focus of the program will be the development of a basis for water main replacement/rehabilitation, service line replacement and meter replacement. The program will also identify specific projects for the next five years.

**The Dilemma**

1. According to a recent publication by the American Water Works Association, the EPA cites in one of its studies that a surprising \$77 billion dollars must be spent on rehabilitating and replacing aging water pipe infrastructure over the next 20 years. This pipe is expected to reach the end of its useful service life soon, and represents a looming national problem that both the President and members of Congress have acknowledged at various times through the news media.

**Technical Solution**

2. CIWC-CW and other utilities must devote additional resources towards acceleration of its distribution system improvement programs. This will accomplish several things; namely, ensure ongoing viability of public water systems, ensure customer health and safety by improving water quality and fire flows, and stabilize costs related to leakage and pipe repairs.

**Financial Solution**

3. In order to recover costs associated with infrastructure replacements, without further increasing the frequency or magnitude of rate cases, CIWC-CW requests the ability to implement a "QIPS Rider" to be effective January 1, 2002. The surcharge will be applied as a percentage of each bill according to the ICC rules.
4. The charge will recover the capital costs and depreciation associated with distribution system improvements. The charge will be reset to zero at the conclusion of each rate case.

**Customer Benefits**

5. There are many customer benefits associated with the acceleration of improvements. The benefits include fewer service outages from breaks, fewer low pressure problems, improved water quality, and improved fire flow delivery.

## **I. Introduction and Overview**

CIWC-CW requests the Commission's approval to implement a QIPS Rider, pursuant to the passage of Illinois State House Bill 1409 (Exhibit A: Pages 1 & 2) in 1999 and the ICC rules promulgated in 2001, to recover the fixed costs (depreciation and pre-tax return) of certain non-revenue producing infrastructure rehabilitation projects completed and placed in service between rate cases. The QIPS Rider is designed to provide the company with the resources to recover costs related to its investment in new utility plant to replace aging water distribution infrastructure, facilitating compliance with evolving regulatory requirements imposed by the Safe Drinking Water Act and the implementation of solutions to regional supply problems. Such an undertaking is vitally important if CIWC-CW is to continue to protect the health and safety of its customers.

In addition, the company believes that the QIPS Rider may enable it to lengthen the cycle of filing for rate base relief, imposed on it by its capital investment needs. A reduction in rate case filing frequency would generate cost savings, which would inure to the benefit of customers.

Innovative alternatives to traditional base rate filings are essential if the company is to meet the engineering, environmental and financial challenges of infrastructure replacement and rehabilitation. If the distribution system is allowed to reach the end of its service life without timely replacement, then the frequency of breaks, leaks, service outages, and customer complaints can be expected to accelerate towards that end. It is recognized that the mean life span of water pipe may be longer than 100 years. A 1998 AWWA Research Foundation study suggests that, on the basis of a nationwide utility survey, half of all generic pipe is expected to have a life expectancy within a broad range of 35 to 150 years long. Some pipe of course will fall outside this range. But the consensus mean appears to be close to 100 years. In this regard, it must be kept in mind that water service, more than any other utility service, is critical to maintaining public health as water is a necessity of life and vital for public fire protection purposes. Consequently, any degradation of quality or flows would present unique public health and safety concerns. The QIPS Rider is designed to address these potential problems by giving the company the resources it needs to make improvements in a timely and orderly fashion.

The company proposes that the QIPS Rider become effective for service rendered on or after January 1, 2002. The initial charge will be calculated to recover the fixed costs of eligible plant additions that will be added to rate base during 2002. Thereafter the QIPS Rider will be updated annually to reflect eligible plant additions.

The QIPS Rider will be expressed as a percentage and will be applied to the total amount billed to each customer under the company's otherwise applicable rates and charges, according to the ICC rules. The cost elements (depreciation & pre-tax return) included in the calculation of the QIPS Rider are explained in detail in Section V.

The QIPS Rider will be capped at 5% of the amount billed to customers under otherwise applicable rates and charges. If the cap were reached, no further increases in the QIPS Rider would be sought or permitted.

The QIPS Rider will also be subject to an annual reconciliation, whereby the revenue received under the QIPS Rider for the reconciliation period will be compared to the Company's eligible costs for that period. The difference between such revenues and costs will be recouped or refunded, as appropriate. In addition, the application of the QIPS Rider shall be subject to continuous review and to audit by the Commission at such intervals as the Commission shall determine.

The QIPS Rider will be reset to zero as of the effective date of new base rates that provide for prospective recovery of the annual costs that had theretofore been recovered under the QIPS Rider.

## **II. Need for the QIPS Rider**

For many years, it was assumed that the water utility business was a relatively risk-free endeavor, particularly in comparison with other fixed utilities. Sources of supply were abundant, water quality concerns were few, and capital requirements were minimal and largely attributable to requests for new service. Unfortunately that is no longer the case. Moreover the rate-setting practices and procedures that were put in place during that historic period of relative stability have simply not kept pace with the rapidly changing nature of the water utility industry.

Due to a wide variety of federal and state legislative and regulatory initiatives, CIWC-CW along with other major water companies, has been required to make a very significant investment in new utility plant in recent years. In addition, the implementation of a meter replacement program, and distribution system improvements have needed to be undertaken.

In light of the mounting challenges, it is critically important that CIWC-CW maintain access to the capital markets on reasonable terms. While this task would be formidable under normal circumstances, it has been made all the more difficult by Standard & Poors tightening of the ratings benchmarks for water utilities. Those revisions, which amongst other things, increased coverage requirements and decreased acceptable debt levels, underscore the investment community's growing concern over the risks facing the water utility industry today.

### **III. Plant Additions That Qualify for the QIPS**

Under the ICC rules, the property additions eligible for the QIPS Rider will be limited to revenue neutral infrastructure projects, consisting principally of replacement investments in - - Accounts 331 (Transmission & Distribution Mains), 333 (Services), 334 (Meters and Meter Installations), and 335 (Hydrants). More specifically QIPS-eligible property will consist of the following:

- a) services, meters and hydrants installed as replacements for existing customers;
- b) mains and valves installed as replacements for existing facilities that have worn out, are in deteriorated condition or are otherwise at the end of their service lives;
- c) mains installed to eliminate dead ends;
- d) main cleaning & relining projects; and
- e) unreimbursed capital projects to relocate company facilities due to highway relocations caused by others.

Without the QIPS Rider, the cost recovery and attrition problems created by infrastructure replacement projects will only get worse given the magnitude of the future investment those projects will demand.

The Company's current rate of infrastructure rehabilitation must be accelerated to avoid a serious shortfall between the end of the service lives of existing property and the replacement or rehabilitation of that property. However, to achieve a meaningful acceleration in the rate of performing this work, it is imperative that the Company have the resources to increase its investment above current levels. Traditional base rate filings, even on an annual basis, cannot keep pace with the increase in investment this program demands.

What are the likely consequences if the Company cannot increase its rate of infrastructure rehabilitation? In the Company's view, there will be significant adverse consequences for itself, its customers and, ultimately, for the environmental and economic well being of the state of Illinois as a whole. Unless steps are taken now for greater infrastructure investment, water supply and customer service in general will suffer and potentially degrade to unacceptable levels.

Infrastructure rehabilitation cannot be deferred indefinitely, but instead should be accelerated. If it is not, a day of reckoning will come, as it already has come for some large municipally-owned systems that tried to keep rates low, in the short term, by deferring maintenance, replacement and rehabilitation of essential facilities. The result has been the need for those systems to make enormous investments over short time horizons without the flexibility to manage either the construction or the financing of these improvements in an orderly fashion. And, at the same time customers are being hit with significantly higher rates to finance these improvements, they are experiencing the leading edge of the serious service problems that are the inevitable result of neglecting the need for consistent, timely

rehabilitation of their water systems. Customers are understandably displeased when demands for higher rates are accompanied by poor service.

#### **IV. Benefits of a QIPS Rider**

In conjunction with the infrastructure replacement program, use of a QIPS Rider provides benefits.

##### Potential Decrease In the Frequency of Rate Filings

The placement in service of new plant additions is one of the major factors driving the need for water utilities to seek increases in revenues. With the approval of the QIPS Rider, CIWC-K would be in a better position to absorb increases in other categories of costs for a longer period, particularly during times of relatively low inflation. Customers would obviously benefit from the reduction in rate case frequency and the resulting reduction in associated administrative costs, including the costs of consultants and legal fees. In addition, the QIPS Rider would provide for more gradual rate increases and would minimize the potential for “rate shock” that could occur from reflecting large amounts of infrastructure investment in rate base only as part of periodic base rate filings.

##### Potential Avoidance of Increased Risk and Higher Capital Costs

When Standard and Poor’s tightened the ratings benchmarks for water utilities in the Spring of 1992, it specifically cited the industry’s mounting dependence on “nonrevenue-producing assets to meet future and current water needs and mandated water quality standards” and urged regulators to implement “innovative regulatory policy to allow for reasonable financial protection measures”. The Adoption of the QIPS rules has sent a very positive signal and, over time, could avoid increased perceptions of risk and higher capital costs which might otherwise result as the investment community becomes more aware of the need for water utilities to replace large segments of their distribution systems.

## **V. Water Main and Water Meter Replacement Prioritization Program**

### **A) Distribution System Discussion**

The focus of the discussion in this section is the identification of an appropriate level of expenditure for QIP at Candlewick, and the development of a water main replacement and meter replacement prioritization program to cover its first five years and beyond. The costs attached to the final list of recommended candidates reflect pipe replacement only. It is assumed that any valves, hydrants, and services associated with these pipe projects will also be replaced during the normal course of pipe replacement activity at additional cost. Historically, Candlewick has replaced very little of their existing water main or meters over the last ten years. The mains in all of the cul-de-sacs are mostly 2" mains and this presents a quantity and quality problem with the water supply. Because of pressure problems, our need is to replace these mains with larger diameter mains and in some cases loop them to another main. This will alleviate pressure and flow problems. The need for increased replacement of undersized and dead-end mains relates in part to the recent construction of homes on cul-de-sacs in the community. The recent construction explains the increase of the replacement rate for the year 2002 as compared to the historical level. Another major need is to replace the water meters that are over 10-years of age. Because of the nature of the buildup of Candlewick Lake, the majority of homes were built starting in 1990 to the present time. This creates a need for replacement of at least 225 meters per year from that building activity plus many other meters that were installed in the homes built prior to 1990. This replacement program will be needed for many years to come. The Candlewick Division 10+ year old meter replacement program began with the years of 1990 & 1991. Meters consisted of Rockwell SRII 5/8"x 3/4" w/ TP remotes and 3/4"x 3/4" Sensus SRII w/ TP remotes. It has been noted that 10+ year's meters decrease in efficiency and it is more cost effective to have them replaced then to be rebuilt. Prior to 1990, Badger 5/8"meters were installed and have since been replaced with Sensus SRII 3/4" x 3/4". All of these meters need to be replaced with current remote reading technology to insure accurate customer billings and efficiencies that are derived from remote water meter reading. The increased age of the meters is the reason for the increased replacement rate from the historical level. Teplacement rates for the 1996-2000 historical period and for 2001 and 2002 are shown in CIWC Exhibit 4.1 (B), which accompanies my testimony.

### **Candlewick Projects**

<u>Year</u>	<u>Name</u>	<u>Description</u>	<u>Cost</u>	<u>Acct. #</u>
2002	1990-92 Meters	Replace 5/8" x 3/4" Rockwell Meters w/ 3/4" x 3/4" RF Meters	\$45,000	334
2003	1992-93 Meters	Replace 5/8" x 3/4" Rockwell Meters w/ 3/4" x 3/4" RF Meters	\$45,000	334



2004	1993-94 Meters	Replace 5/8" x 3/4" Rockwell Meters w/ 3/4" x 3/4" RF Meters	\$45,000	334
2005	Queens PI & Lamp- Lighter –Phase I	Loop & replace 420' of 2" main with 6".	\$38,000	331
2005	Queens PI Services	Replace 15-1" services	\$7,000	333
2006	Queens PI & Lamp- lighter-Phase II	Loop & replace 420' of 2" main with 6"	\$38,000	331
2006	Queens PI Services	Replace 14-1" services	\$7,000	333
2007	Queens PI & Lamp- lighter -Phase III	Loop & replace 560' of 2" main with 6"	\$45,000	331
2008	Galahad Ct & Corn- wall Cr-Phase I	Loop & replace 420' of 2" main with 6"	\$38,000	331
2008	Galahad Ct & Corn- wall Cr Services	Replace 17-1" services	\$7,000	333
2009	Galahad Ct & Corn- wall Cr Phase II	Loop & replace 420' of 2" main with 6"	\$38,000	331
2009	Galahad Ct & Corn- wall Cr Services	Replace 17-1" services	\$7,000	333
2010	Galahad Ct. & Corn- wall Cr Phase III	Loop & replace 490' of 2" main with 6"	\$45,000	331
2011	Galahad Ct & Corn- wall Cr Phase IV	Loop & replace 270' of 2" main with 6"	\$27,000	331
2011	Brandywine Dr & Picadily Dr Phase I	Loop & replace 177' of 2" main with 6"	\$13,700	331
2011	Brandywine Dr & Picadily Dr Services	Replace 9-1" services	\$4,300	333
2012	Brandywine Dr & Picadily Dr Phase II	Loop & replace 447' of 2" main with 6"	\$40,700	331

2012	Brandywine Dr & Picadily Dr Services	Replace 9-1" services	\$4,300	333
2013	Brandywine Dr & Picadily Dr Phase III	Loop & replace 276' of 2" main with 6"	\$27,600	331
2013	James Cr & Heath Dr Phase I	Loop & replace 181' of 2" main with 6"	\$14,100	331
2013	James Cr & Heath Dr Services	Replace 7-1" services	\$3,300	333
2014	James Cr & Heath Dr Phase II	Loop & replace 443' of 2" main with 6"	\$41,700	331
2015	James Cr & Heath Dr Services	Replace 7-1" services	\$3,300	333

The following shows the revenue effect of the program:

<u>Year</u>	<u>Annual QIPS Revenue</u>	<u>Cumulative QIPS Revenue</u>
2002	\$5,567	\$5,567
2003	\$5,567	\$11,134
2004	\$5,567	\$16,701
2005	\$5,567	\$22,268
2006	\$5,567	\$27,835